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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/460,107 12/13/99 ASTLE

T 130-129

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HM12/0522

EXAMINER

LU, F

ART UNIT	PAPER NUMBER
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1655

8

DATE MAILED: 05/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/460,107

Applicant(s)

Astle

Examiner

Frank Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Mar 12, 2001

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-28 is/are pending in the application.

4a) Of the above, claim(s) 1-11 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 12-23 and 27 is/are rejected.

7) Claim(s) 24-26 and 28 is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are objected to by the Examiner.

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) Notice of References Cited (PTO-892)

18) Interview Summary (PTO-413) Paper No(s). _____

16) Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) Notice of Informal Patent Application (PTO-152)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) Other: _____

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DETAILED ACTION

Response to Appeal Brief

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and reasonable, therefore, the finality of that action is withdrawn.

Priority

2. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78).

Oath/Declaration

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because applicant has not declared the priority of earlier applications which were shown in the specification (page 2).

Specification

5. The disclosure remains objected to because of the following informalities: Both Application Serial Nos. 09/271,050 and 09/198,018 are pending application. No patent has

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issued for these cases. The applicant is advised to delete US Patent No. and issued date on line 4, 5, and 8 of page 2 of subject application. Please check the specification for mistakes.

Appropriate correction is required.

Response to Arguments

The argument “the missing information is still not available, but will be inserted when it does become available” have been fully considered and have not been found pervasive since no patent has issued for the cases 09/271,050 or 09/198,018. The applicant is advised to delete US Patent No. and issued date on line 4, 5, and 8 of page 2 of subject application.

Claim Rejections - 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12-15, 17-23, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Danssaert *et al.*, (US Patent No. 5,779,981, published on July 14, 1998).

Danssaert *et al.*, teach thermal cycler including a temperature gradient block. As shown in Figure 3, in PCR, the first, second, and third blocks were programmed to be maintained at a temperature range of between about 25 °C to 99 °C, and were used for denaturing, annealing and extension respectively. The fourth block (made by metal, see column 5, first paragraph) was generally maintained at between 4 and 25 °C (see column 6, last paragraph). The reaction

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mixtures could be moved between gradient blocks (see column 3, eighth paragraph) using RoboCycler system (see Staratagene catalog, pages 256 and 257, 1994) and reactions were carried out in 500 μ l eppendorf tubes (see column 7). Note that: (1) the block with a plurality of reaction wells could be considered as index patterns of reagent wells as described in claim 12; (2) different gradient blocks with different temperature could be considered as heat transfer stations as described in claim 12; and (3) a reagent well and 500 μ l eppendorf tube inside of the reagent well could be considered as a sealed reagent well as described in claim 13 with the limitations of claims 14-17, and 19; (4) the addition of PCR reagents from different stock solutions into the eppendorf tubes after the eppendorf tubes were inserted into the wells of a metal block could be considered to have the limitations of claims 13, 21, and 22 and stock solutions could be refilled as described in claim 23; (5) RoboCycler system (see above) could be considered as electronic stepper drive as described in claim 18; and (6) the cap of eppendorf tubes could be considered to be peelable as described in claim 27.

Therefore, Danssaert *et al.*, teach all limitations recited by claims 12-15, 17-23, and 27.

5. Claims 12-17, 19, 21-23 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitsuhashi *et al.*, (US Patent No. 5,545,528, published on August 13, 1996).

Mitsuhashi *et al.*, teach PCR. In experiment 3, single stranded cDNA was mixed with each of the sense and antisense primers, PCR buffer and Taq polymerase (Promega) in each well of a 96 well microtiter plate. PCR was carried out either polypropylene tubes, or polypropylene plates (Coster, Nunc). For tubes, PCR was carried out in thermal cycles (model 480).

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Perkin-Elmer Cetus, Norwalk, Conn.). For Nunc plates, PCR was done in thermal cycles (CMJ Research). For Coster plates, PCR was performed by manually soaking into 3-8 different water bathes (see column 12). Note that: (1) 96 well in the microtiter plate could be considered as index patterns of reagent wells with the limitations of claims 12, 14-17, and 19; (2) different water bathes with different temperature could be considered as heat transfer stations as described in claim 12; (3) the mixing of PCR reagents by pipetting different reagents from their stock solutions can be considered to have the limitations of claims 13, 21 and 22 and stock solutions cold be refilled as described in claim 23; and (4) the cover of microtiter plate could be considered as a peelable sealer of the reagent wells as described in claim 27.

Therefore, Mitsuhashi *et al.*, teach all limitations recited by claims 12-17, 19, 21-23, and 27.

Conclusion

6. Claims 24-26 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. No Claim is allowed.

8. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94

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(December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is either (703) 308-4242 or (703)305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (703) 305-1270. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (703) 308-1152.

Any inquiry of a general nature or relating to the status of this application should be directed to the Chemical Matrix receptionist whose telephone number is (703) 308-0196.

Frank Lu
May 21, 2001



Ethan Whisenant, Ph.D.
Primary Examiner (FSA)